

## **APPENDIX A**

### **Engineering Field Trip Report**

### **Hungry Hollow Dam**



| Field Trip Log          |                   |                     |                  |
|-------------------------|-------------------|---------------------|------------------|
| <b>Trip Log Number:</b> | 5                 | <b>Project No.:</b> | 1003032.01180502 |
| <b>Dates:</b>           | 6/11/02           | <b>Times:</b>       | 1545-1615        |
| <b>Site Name:</b>       | New Hungry Hollow | <b>Location:</b>    | Porterville      |
| <b>Prepared By:</b>     | DKR/JMH/WAM       | <b>Reviewed By:</b> |                  |
| <b>Date:</b>            | 6/11/02           | <b>Date.:</b>       |                  |

| Attendees/Visitors Name | 1.1.1.1.1.1.1 Organization/Phone/Email   |
|-------------------------|--|
| DKR                     | MWH, 925.685.6275 x125, david.k.rogers@ei.mwhglobal.com  |
| JMH                     | MWH, 925.685.6275 x143, <a href="mailto:james.m.herbert@ei.mhwglobal.com">james.m.herbert@ei.mhwglobal.com</a> |
| WAM                     | MWH, 425.602.4025 x1060, william.a.moler@ei.mwhglobal.com  |
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|--|--|
| <b>Weather Conditions:</b>                           |  |
| Clear with slight haze, warm (low 90s), light breeze |  |
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|  |  |

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| <b>Access Route (attach map):</b>  |  |
| Highway 99, State highway 190 (E) through Porterville to Plano Road (S), to Teapot Dome Rd (E), to Rd 268 (S), to Av. 120 (E). |  |
|  |  |

| Attachments:              | Yes | No |
|---------------------------|-----|----|
| Photo Log                 | ✓   |    |
| Photos                    | ✓   |    |
| Video Log (available)     | ✓   |    |
| Dictation Log (available) | ✓   |    |
| Topographic Map           | ✓   |    |

|                 |  |
|-----------------|--|
| <b>Purpose:</b> |  |
|-----------------|--|

Review proposed location of new dams site.

### **Field Observations:**

#### **Existing Structures/Cultural Features:**

Scattered ranch buildings and a County Road Yard were observed upstream of the proposed damsite.

#### **Right of Way/Access Restrictions:**

Access to the Hungry Hollow damsite is available via a paved county road (Av. 120).

#### **Overhead/Buried Utilities:**

Overhead power / telephone lines were observed on both sides of the valley. High voltage lines were noted crossing the reservoir area from north south.

#### **Description of Proposed Structures (attached a field sketch or sketch on a topo map):**

Technical Memorandum 4 (URS, 2000) reported a USCOE Hungry Hollow damsite as a 5,200-foot long, zoned earthfill dam extending to a height of 267 feet. Gross pool elevation would be ~827 ft with a maximum storage of 800,000 acre-feet or 850,000 acre-feet. A 3-mile, 10-ft diameter tunnel would divert water to Hungry Hollow from Lake Success.

URS evaluated a new zoned earthfill dam extending to ~260 ft in height with a storage capacity of 850,000 ac-ft. In addition to Deer Creek runoff, a 15,000-ft, 10-ft diameter tunnel would divert water from Lake Success. Excess water from the Friant-Kern Canal was also considered. This would require two pump stations and a channel extending to the canal (URS, 2000).

A reconnaissance Design Drawing prepared by the USBR in 1961 showed a dam the same as that evaluated by URS. The spillway and outlet works were shown in the left abutment and a row of relief wells were illustrated along the downstream toe of the dam.

#### **Description of Appurtenant Features (spillways, tunnels, pumping plants, flood routing/coffer dams/dewatering during construction, outlet works, switch yards, transformer yards, transmission lines, conveyance pipelines/canals, access roads, security, operation/maintenance):**

The URS and USBR improvements would include the ~260-ft dam, spillway, outlet works, and three-mile diversion tunnel (URS, 2000, USBR, 1961). The tunnel alignment was not shown in either the URS or USBR documents.

#### **Briefly Describe Geologic/Geotechnical Site Conditions:**

The Hungry Hollow damsite is located at the boundary of the Sierra Nevada foothills and the Great Valley. The Hungry Hollow damsite would be located in a generally

west-flowing tributary to the Tule River. The site is located in the “serpentine belt” along the western margin of the Sierra Nevada (USBR, 1975).

Both abutment locations are underlain by Mesozoic ultrabasic intrusive rocks. Pleistocene non-marine deposits (older alluvium) fill much of the valley floor, with the exception of a narrow strip of Recent alluvium associated with the active Deer Creek channel. It appears that the tunnel alignment would extend through pre-Cretaceous meta-sedimentary and meta-volcanic rocks and Mesozoic ultrabasic, basic, and granitic rocks. The tow dikes would probably be founded on pre-Cretaceous meta-sedimentary and Mesozoic ultrabasic rocks. Relatively thick Pleistocene and Recent alluvial sediments cover the valley floor. The reservoir area is underlain mostly by Mesozoic granitic and basic rocks and pre-Cretaceous meta-sedimentary rocks (CDMG, 1964 and 1965).

Previous studies indicate that there are no faults in the area capable of producing ground motions greater than those generated by four known regional sources that include the San Andreas fault system, the Sierra Frontal fault system, the White Wolf fault, and the Garlock fault (USCOE, 1990).

**Location/Description of Nearest Borrow Areas (attach map or show on topo map):**

A quarry operation was observed about 200 yards downstream of the damsite. The USGS topographic map showed a gravel pit ~2¼ -miles upstream of the proposed damsite. The Recent and older alluvium may provide borrow materials.

**Location/Description of Equipment/Material Staging and Lay Down Areas (attach map or show on topo map):**

Potential staging and laydown areas are located upstream and downstream of the proposed Hungry Hollow damsite.

**Identification of Environmental Sensitive Areas (wetlands, springs, rivers, streams, endangered/threatened species habitats, etc.):**

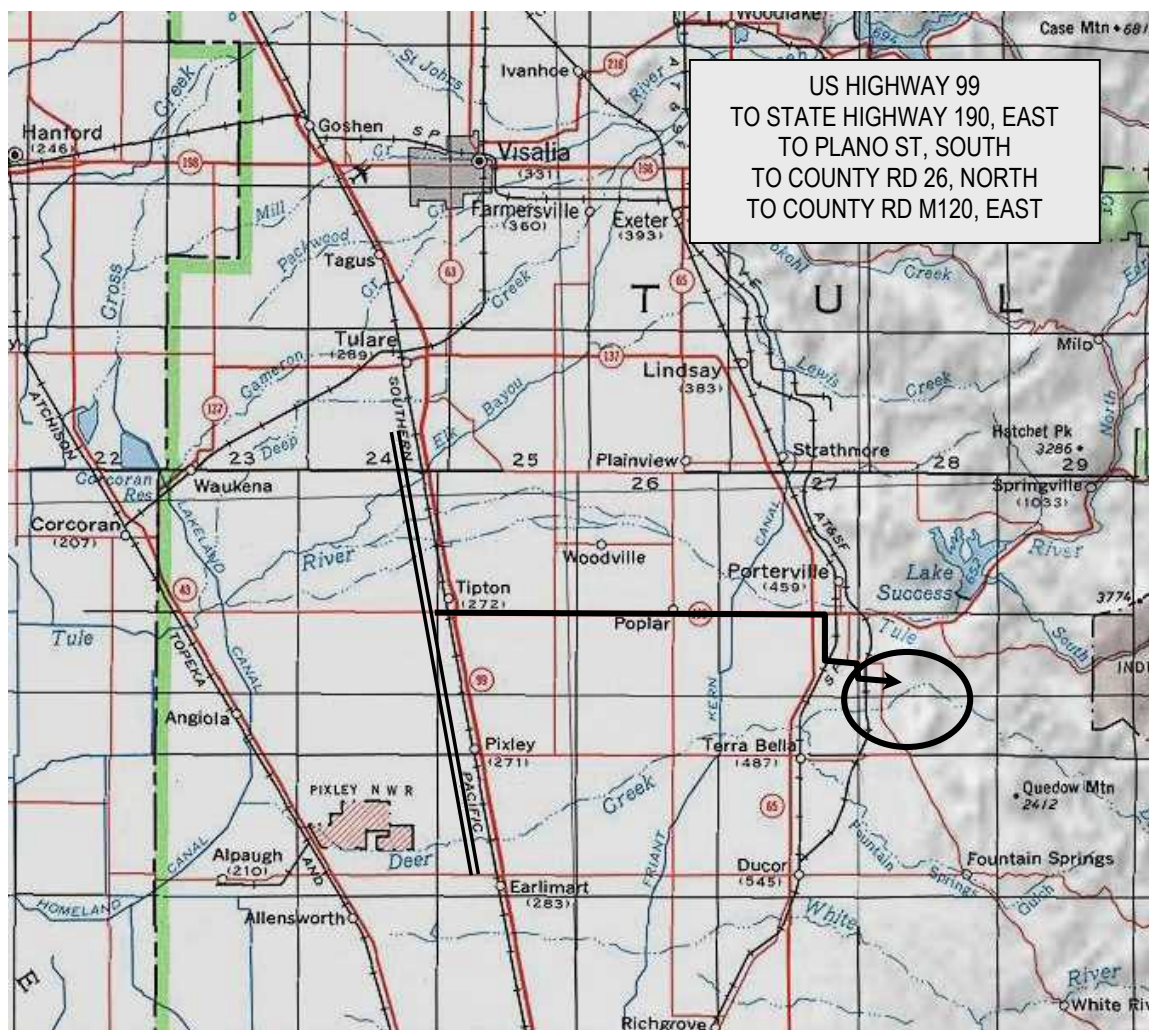
Oak woodland and riparian habitats were noted in Deer Creek valley. The flowing Deer Creek was about 10 feet wide.

**Description of Mining or Other Anthropologic Activities:**

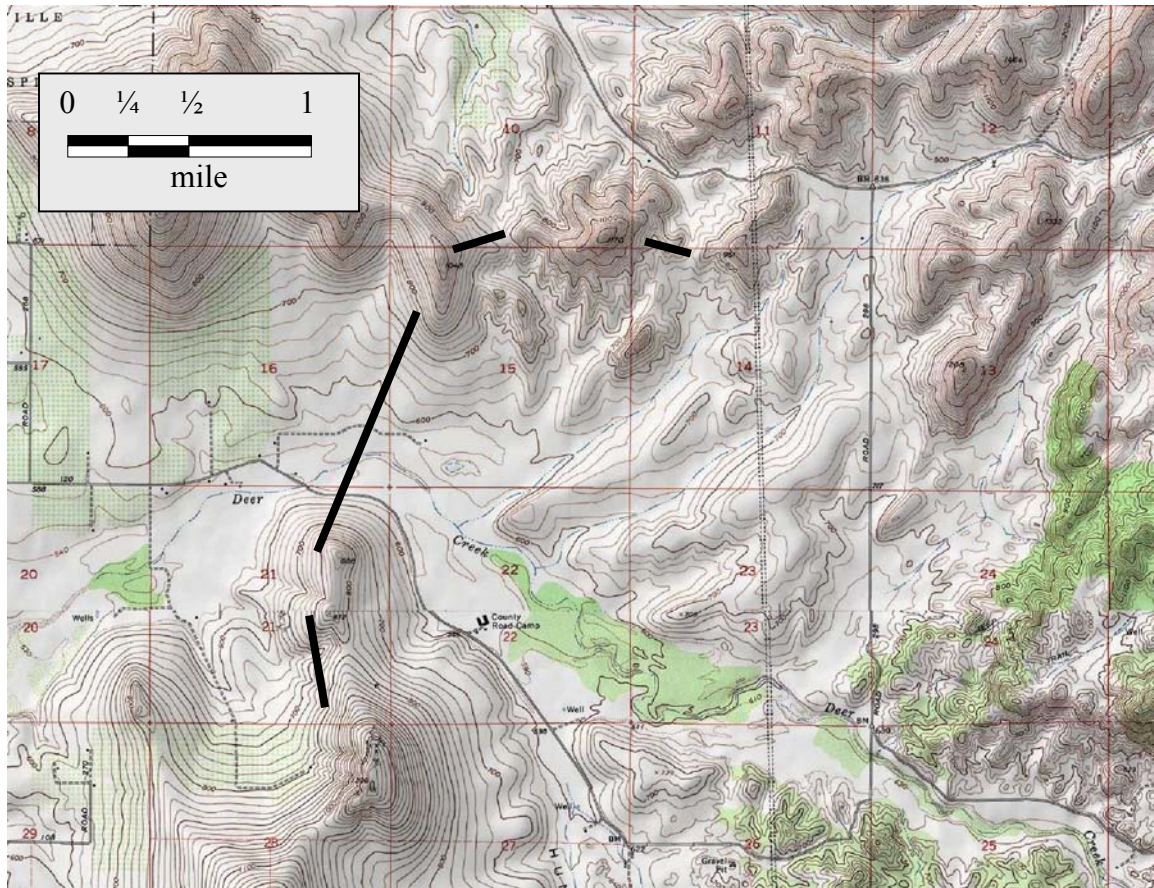
None noted with the exception of a gravel pit located about 2¼ - miles upstream of the damsite.

**Action Items/Data Needs (list who has responsibility and schedule for completion):**

- MWH to prepare draft Technical Memorandum by August 23, 2002.
- USBR to prepare regional seismicity / faulting evaluation by August 23, 2002.



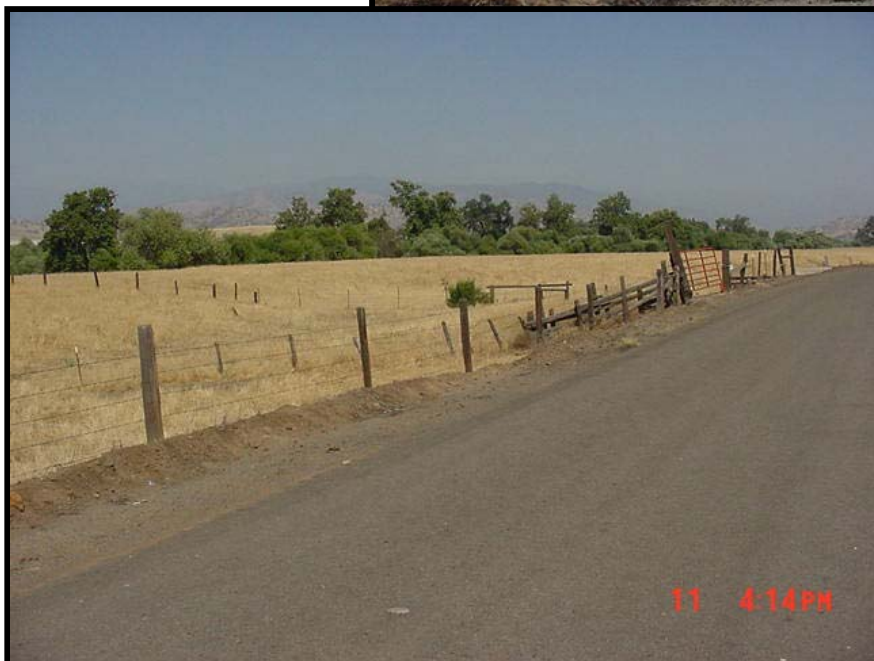






Hungry Hollow –  
Northward view of right  
abutment area.

Southward view of left  
abutment area.



Northeastward view of  
valley floor upstream of  
proposed dam location.